

ABSTRACT OF THE DISCLOSURE

A motor drive for an electric machine includes a live line, a second line, and a ground line. A surge protector includes a first varistor and a gas discharge tube (GDT) that is non-conductive below a trigger voltage and that is conductive above the trigger voltage. The first varistor and the GDT are connected in series between one of the live line and the second line and the second line and the ground line. A second varistor is connected between the other of the live line and the second line and the second line and the ground line. When a voltage on the live line exceeds the trigger voltage, the first varistor, the second varistor and the GDT limit voltage output to the electric machine and deliver excess voltage to the ground line.